May 11, 2006

Mr. Thomas Saviello
Manager, Environment, Health & Safety
International Paper Company
Androscoggin Mill, Riley Road
Jay, ME. 04239

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit ME0001937
Maine Waste Discharge License (WDL) Application W000623-5N-G-M
Proposed Draft Permit/License Modification

Dear Mr. Saviello:

Enclosed is a **proposed draft** MEPDES permit and Maine WDL **modification** (permit hereinafter) which the Department proposes to issue as a final document after opportunity for your review and comment and request for a public hearing. By transmittal of this letter you are provided with an opportunity to comment on the proposed draft permit and its conditions (special conditions specific to this permit are enclosed; standard conditions applicable to all permits are available upon request). If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies, as required by our regulations, and from any other parties who have notified the Department of their interest in this matter.

All comments must be received in the Department of Environmental Protection office on or before the close of business **Monday, June 12, 2006.** Failure to submit comments in a timely fashion will result in the final document being issued as drafted. Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: Electronic distribution list

IN THE MATTER OF

INTERNATIONAL PAPER COMPANY	)	MAINE POLLUTANT DISCHARGE
JAY, FRANKLIN COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PULP & PAPER MANUFACTURING FACILITY	)	AND
ME0001937	)	WASTE DISCHARGE LICENSE
W000623-5N-G-M **APPROVAL**	)	**MODIFICATION**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq., and Maine Law 38 M.R.S.A., Section 414-A et. seq., [more specifically 38 MRSA §§ 414-A(5)(A&B)] and all applicable regulations [more specifically 06-096 CMR Chapter 522(4)], the Department of Environmental Protection (Department hereinafter) is hereby modifying the combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0001937/Maine Waste Discharge License (WDL) #W000623-5N-F-R (permit hereinafter) issued to the INTERNATIONAL PAPER COMPANY (IP hereinafter), on September 21, 2005. With its supportive data, agency review comments, and other related materials on file, the Department FINDS THE FOLLOWING FACTS:

PERMIT SUMMARY

The Department is modifying the aforementioned MEPDES permit/WDL to incorporate more stringent water quality based mass limitations for biochemical oxygen demand (BOD_5), more stringent interim water quality based limits for total phosphorus and ortho-phosphorus, reducing the quantity of oxygen to be injected into Gulf Island Pond in an area known as Lower Narrows and modifying the schedules to come into compliance with water quality based mass limitations for total suspended solids (TSS), total phosphorus and ortho-phosphorus. The permit also provides for reductions in BOD_5, TSS and total phosphorus should IP cease treating process waste waters from the Wausau-Mosinee facility. The modifications are as follows:

1. Reducing the summertime (June 1 – September 30) monthly average, weekly average and daily maximum mass limitations for BOD_5 from 7,400 lbs/day, 11,100 lbs/day and 13,875 lbs/day respectively, to 4,500 lbs/day, 6,400 lbs/day and 8,000 lbs/day respectively, and establishing the limitations as year-round limitations rather than seasonal.

2. Modifying the final dates in the schedules for compliance with the final summertime 60-day rolling average TSS mass limitation of 10,000 lbs/day from June 1, 2015 to June 1, 2010 and the final annual average TSS mass limitation of 14,738 lbs/day from January 1, 2015 to January 1, 2010.

3. Reducing the monthly average mass limit (beginning upon issuance of the permit) for total phosphorus from 193 lbs/day to 150 lbs/day and reducing the monthly average mass limit for ortho-phosphorus from 44 lbs/day to 33 lbs/day.

4. Modifying the final date in the schedule of compliance for the summertime total phosphorus and ortho-phosphorus mass limitations of 130 lbs/day and 22 lbs/day respectively, from June 1, 2015 to June 1, 2008.

PERMIT SUMMARY (cont'd)

5. Reducing the quantity of oxygen that IP is required to inject into Lower Narrows from 24,891 lbs/day to 14,891 lbs/day. It is noted the schedule of compliance associated with this requirement has been stayed by the Board of Environmental Protection (Board) until the Board makes a decision on the appeal of the September 21, 2005 permit.

6. Incorporating a provision in the permit that reduces mass limitations for BOD_5, TSS, and total phosphorus should the waste water from the Wausau-Mosinee facility in Livermore Falls no longer be treated at the IP waste water treatment facility.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated May 11, 2006 and subject to the terms and conditions contained herein, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A., Section 464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

CONCLUSIONS (cont'd)

5. This permit modification is necessary to correct technical or procedural mistakes or errors in the September 21, 2005 permit issued by the Department and is necessary as new information has become available subsequent to the issuance of the September 21, 2005 permit.

ACTION

THEREFORE, the Department is hereby modifying combination MEPDES permit #ME0001937/WDL W000632-5N-F-R, issued by the Department on September 21, 2005, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including;

1. The attached Special Conditions, including effluent limitations and monitoring requirements.

2. All terms and conditions in combination MEPDES permit #ME0001937/ WDL#W000632-5N-F-R, dated September 21, 2005, [except that Special Condition K(b), was stayed by the Board of Environmental Protection on March 22, 2006] are not being modified by this permitting action remain in effect and enforceable.

3. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits,*" revised July 1, 2002, copy attached.

4. This permit modification expires on September 21, 2010, concurrent with combination MEPDES permit #ME0001937/WDL#W000632-5N-F-R issued by the Department on September 21, 2005.

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____, 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date filed with Board of Environmental Protection _____

This order prepared by GREGG WOOD, BUREAU OF LAND AND WATER QUALITY
W06235NGM 5/11/06

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge treated process waste waters, treated sanitary wastewaters, treated landfill leachate, general housekeeping wastewaters, storm water, contact and non-contact cooling waters from **Outfall #001** and bleach plant effluents (internal waste streams consisting of three points, the 15, 35 and 45 stages in each bleach plant) from **Outfall #100 and Outfall #200**, to the Androscoggin River. Such discharges shall be limited and monitored by the permittee as specified below. The italicized numeric values in brackets in the table below and the tables that follow are not limitations but are code numbers used by Department personnel to code Discharge Monitoring Reports (DMR's).

OUTFALL #001A & #001B[(1)] – Secondary treated waste waters **with** Wausau-Mosinee contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	---	51 MGD*[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	4,500 #/day *[26]*	6,400 #/day *[26]*	8,000 #/day *[26]*	---	---	---	1/Day *[01/01]*	Composite *[26]*

Footnotes:

(1) Outfall #001 - Outfall 001A is a 36" diameter pipe which is normally utilized to convey the treated process wastewaters from the wastewater treatment plant from the mill to the Androscoggin River. During periods of high storm water runoff events due to precipitation or snow melt events, most common in the spring and fall, discharges from Outfall 001A are hydraulically limited. As a result, the wastewater treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. This permit authorizes the facility to discharge from Outfall 001B, a 14" diameter pipe located adjacent to Outfall 001A. The discharges from Outfall 001B will receive the same degree of treatment as discharges from Outfall 001A and all flows discharged through the secondary outfall are measured and included in analysis for all effluent samples and calculations for compliance purpose.

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Revised 5/11/06

SPECIAL CONDITIONS

A(1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters **with** Wausau-Mosinee contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Upon issuance								
TSS *[00530]*								
(June 1 – Sept 30)	12,000 #/day	---	22,300 #/day	---	---	---	1/Day *[01/01*	Composite *[24]*
	12,000 #/day[(2)]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	25,000 #/day	---	44,600 #/day	---	---	---	5/Week *[05/07]*	Composite *[24]*
	17,557 #/day[(3a)] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*
TSS *[00530]*								
(June 1 – Sept 30)								
Beginning June 1, 2010	12,000 #/day	---	22,300 #/day	---	---	---	1/Day *[01/01]*	Composite *[24]*
	10,000 #/day[(2)]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	25,000 #/day	---	44,600 #/day	---	---	---	5/Week *[05/07]*	Composite *[24]*
Beginning Jan. 1, 2010	14,738 #/day[(3b)] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*

Revised 5/11/06

SPECIAL CONDITIONS

A(1) EFFLUENT LIMITATIONS AND MONITORI)NG REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters **with** Wausua-Mosinee contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Total Phosphorus *[00665]* *(June 1 – September 30)*								
Upon issuance	150 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2008	130 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*
Ortho-phosphorus *[70507]* *(June 1 – September 30)*								
Upon issuance	33 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2008	22 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*
Oxygen Injection (*June 1 – Sept. 30)*								
Upon issuance	---	---	Report #/day[(5)]	---	---	---	1/Day	Record
Beginning June 1, 2010	---	---	39,900 #/day[(6)]	---	---	---	1/Day	Record
	---	---	14,891 #/day[(7)]	---	---	---	1/Day*[01/01]*	Record *[RC]*

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 12,000 lbs/day becomes effective on June 1, 2006.

(3a) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

(3b) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

(4) Report two (2) significant figures.

(5) Injected at Upper Narrows. See Special Condition K, *Gulf Island Pond Oxygen Injection Operation.*

(6) At Upper Narrows. Assumes IP injects 14,891 lbs (assumes 33% efficiency) at Lower Narrows or an equivalent amount given an alternate efficiency.

(7) At Lower Narrows. Assumes IP injects 39,900 lbs (assumes 33% efficiency) at Upper Narrows or an equivalent amount given an alternate efficiency.

SPECIAL CONDITIONS

A EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning with the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge treated process waste waters, treated sanitary wastewaters, treated landfill leachate, general housekeeping wastewaters, storm water, contact and non-contact cooling waters from **Outfall #001** to the Androscoggin River. The limitations in the table below and tables that follow become effective upon cessation of process waste water generated by the (N/F) Wausau – Mosinee facility and conveyed to and treated by the permittee's waste water treatment facility. See Special Condition R, *Wausau-Mosinee (N/F),* of this permit. Such discharges shall be limited and monitored by the permittee as specified below.

OUTFALL #001A & #001B[(1)] – Secondary treated waste waters **without** Wausau-Mosinee's waste water contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	---	51 MGD*[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	4,150 #/day *[26]*	5,900 #/day *[26]*	7,376 #/day *[26]*	---	---	---	1/Day *[01/01]*	Composite *[24]*

Footnotes:

(1) Outfall #001 - Outfall 001A is a 36" diameter pipe which is normally utilized to convey the treated process wastewaters from the wastewater treatment plant from the mill to the Androscoggin River. During periods of high storm water runoff events due to precipitation or snow melt events, most common in the spring and fall, discharges from Outfall 001A are hydraulically limited. As a result, the wastewater treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. This permit authorizes the facility to discharge from Outfall 001B, a 14" diameter pipe located adjacent to Outfall 001A. The discharges from Outfall 001B will receive the same degree of treatment as discharges from Outfall 001A and all flows discharged through the secondary outfall are measured and included in analysis for all effluent samples and calculations for compliance purpose.

SPECIAL CONDITIONS

A(2) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters **without** Wausau-Mosinee's waste water contribution

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Upon cessation								
TSS *[00530]*								
(June 1 – Sept 30)	11,580 #/day	---	21,520 #/day	---	---	---	1/Day *[01/01*	Composite *[24]*
	11,580 #/day[(2)]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	24,125 #/day	---	43,039 #/day	---	---	---	5/Week *[05/07]*	Composite *[24]*
	16,942 #/day[(3a)] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*
TSS *[00530]*								
(June 1 – Sept 30)								
Beginning June 1, 2010	11,580 #/day	---	21,520 #/day	---	---	---	1/Day *[01/01]*	Composite *[24]*
	9,650 #/day[(2)]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	24,125 #/day	---	43,039 #/day	---	---	---	5/Week *[05/07]*	Composite *[24]*
Beginning Jan. 1, 2010	14,222 #/day[(3b)] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters **without** Wausau-Mosinee's waste water contribution

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Total Phosphorus *[00665]* *(June 1 – September 30)*								
Upon cessation	148 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2008	128 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*
Ortho-phosphorus *[70507]* *(June 1 – September 30)*								
Upon cessation	33 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2008	22 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*
Oxygen Injection (*June 1 – Sept. 30)*								
Upon cessation	---	---	Report #/day[(5)]	---	---	---	1/Day	Record
Beginning June 1, 2010	---	---	39,900 #/day[(6)]	---	---	---	1/Day	Record
	---	---	14,891 #/day[(7)]	---	---	---	1/Day *[01/01]*	Record *[RC]*

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 11,580 lbs/day becomes effective on June 1, 2006.

(3a) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

(3b) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

(4) Report two (2) significant figures.

(5) Injected at Upper Narrows. See Special Condition K, *Gulf Island Pond Oxygen Injection Operation.*

(6) At Upper Narrows. Assumes IP injects 14,891 lbs (assumes 33% efficiency) at Lower Narrows or an equivalent amount given an alternate efficiency.

(7) At Lower Narrows. Assumes IP injects 39,900 lbs (assumes 33% efficiency) at Upper Narrows or an equivalent amount given an alternate efficiency.

SPECIAL CONDITIONS

F. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following addresses:

Maine Department of Environmental Protection
Central Maine Regional Office
Bureau of Land & Water Quality
Division of Water Quality Management
State House Station #17
Augusta, ME. 04333

K. GULF ISLAND POND OXYGEN INJECTION OPERATION

a. **Beginning the effective date of this permit**, IP, either individually or in combination with Florida Power Light & Energy (FPLE), Rumford Paper Company and Fraser Paper NH LLC shall operate the Gulf Island Pond Oxygenation Project (GIPOP) located at Upper Narrows in accordance with the following:

Begin GIPOP at Upper Narrows operation when the 3-day average temperature(1) at the Turner Bridge is greater than 18°C in June.

Oxygen Injection Thresholds	% Normal Capacity	Oxygen Injection* (lb/day)
Q(2) > 3500 cfs	Idle	8,000
T<24°C & 3,000 < Q ≤ 3,500	50%	36,500
T<24°C & 2,500 < Q ≤ 3,000	75%	54,750
T<24°C & Q < 2,500	100%	73,000
T≥24°C & Q ≤ 3,500	125%	91,000

* Or equivalent amount injected into the water column at an improved efficiency.

End GIPOP at Upper Narrows operation when 3-day average temperature at Turner Bridge is less than 21°C in September.

SPECIAL CONDITIONS

K. GULF ISLAND POND OXYGEN INJECTION OPERATION (cont'd)

The oxygenation system plenum shall be installed and available for operation on June 1 of each year or as soon thereafter as river flows recede to 5,000 cfs or less (to allow for safe installation of the system). Once begun, GIPOP at Upper Narrows operation shall continue, with oxygen injected in accordance with the above requirements, until operation is ended in September, as specified above. Once ended, GIPOP at Upper Narrows operation shall not begin again until the following June, as specified above.

Footnotes:

(1)All temperature measurements shall be obtained from the continuous temperature monitor at Turner Bridge and shall be expressed as a 3-day rolling average. Because the monitor records maximum and minimum temperatures for a given day, the daily average temperature will be defined as the arithmetic mean of the maximum and minimum temperatures for any given day. The 3-day rolling average is defined as the arithmetic mean of three daily average temperature values.

(2)All flow measurements shall be obtained from the USGS gage at Rumford and shall be expressed as a 3-day rolling average. The flow gage does record average daily flows thus the 3-day rolling average is defined as the arithmetic mean of the three daily average flow values.

Failures shall be reported orally to the Department as soon as possible. Written notification shall be submitted to the Department within five days.

For the months of June, July, August and September of each calendar year, the permittee shall submit a spreadsheet (similar in format to the example below) to the Department as an attachment to the respective monthly Discharge Monitoring Report (DMR).

Date	Temperature (°C)	River Flow (cfs)	Oxygen Injected (lbs/day)
6/1	23°C	3,200 cfs	38,000 lbs/day
--	--	--	--
6/30	25°C	2,900 cfs	92,150 lbs/day

SPECIAL CONDITIONS

K. GULF ISLAND POND OXYGEN INJECTION OPERATION (cont'd)

b. Schedule of compliance (It is noted the schedule that follows was stayed by the Board of Environmental Protection (Board) in a Procedural Order dated March 22, 2006. The Board's Procedural Order states that a new schedule will be established once the Board has made a decision of the appeal of the September 21, 2005 permit.)

On or before December 31, 2006, ***[PCS Code 00199]*** the permittee shall independently or in conjunction with other parties, submit to the Department for review, a progress report on a scope of work and schedule for the construction of the oxygen injection system(s) or an equivalent measure(s) to comply with dissolved oxygen standards in GIP.

On or before December 31, 2007, ***[PCS Code 00701]*** the permittee shall independently or in conjunction with other parties, submit to the Department for review and approval, a scope of work and schedule for the construction of the oxygen injection system(s) or an equivalent measure(s) to comply with dissolved oxygen standards in GIP.

On or before December 31, 2008, ***[PCS Code 00299]*** the permittee shall independently or in conjunction with other parties, submit to the Department for review, a progress report on the construction of the oxygen injection system(s) or an equivalent measure(s) to comply with dissolved oxygen standards in GIP.

One or before December 31, 2009, ***[PCS Code 09699]*** the permittee shall independently or in conjunction with other parties, submit to the Department for review, an Operations and Maintenance (O&M) plan for the oxygen injection system(s) or equivalent measure(s) to comply with dissolved oxygen standards in GIP.

On or before June 1, 2010, the permittee shall be responsible for injecting up to 39,900 lbs/day of oxygen (38% of 105,000 lbs/day transferred at 33% efficiency assumed in modeling for the Upper Narrow diffuser) or an equivalent amount at an alternate efficiency at Upper Narrows (Androscoggin River Mile 31.4).

On or before June 1, 2010, ***[PCS Code 05699]*** the permittee shall install and have fully operational, an oxygen injection system located at Lower Narrows (Androscoggin River Mile 29.5) capable of injecting up to 14,891 lbs/day of oxygen at 33% efficiency or an equivalent amount at an alternate efficiency into the water column between June 1 and September 30th of each year or implement equivalent measure(s) to comply with dissolved oxygen standards in GIP.

The permittee may independently or in conjunction with other parties, submit to the Department for review and approval, a proposal for an alternate oxygen injection system(s) or an alternate oxygen injection plan(s) to meet the oxygen injection requirements recommended in the TMDL. The alternate system(s) must be installed and fully operational on or before June 1, 2010.

SPECIAL CONDITIONS

N. SCHEDULE OF COMPLIANCE

1. **On or before March 1, 2006**, ***[PCS Code 43699]*** the permittee shall submit to the Department for review and approval, with or without conditions, a report of a Comprehensive Performance Evaluation ("CPE") of the wastewater treatment facility utilizing the services of a qualified independent consultant having expertise in treatment of wastewater from pulp and paper mills. Particular emphasis will be given to evaluation of the primary and secondary clarifiers, aeration basin and instrumentation. Prior to beginning the CPE, but in no event later than **October 31, 2005**, ***[PCS Code 00701]*** the permittee shall submit to the Department for review and approval a scope of work for the study. The CPE shall include but not be limited to the following:

   a. Primary clarifiers – Evaluation of the effectiveness of settling aids or other chemicals in the primary clarifiers. The purpose of these aids or chemicals is to improve the removal of pollutants so that loadings to the secondary treatment system are minimized. Particular attention will be given to removal of inorganic solids. A settling aid or chemical identified in the trials as effective in primary clarifiers will be used upon the Department's approval of the study. Alternatively, the permittee may complete pollution prevention projects to remove targeted materials from the wastewater flow.

   b. Aeration basin – Evaluation of all aspects of the physical and biological operations of the basin in order to optimize its performance in the treatment process. Of particular concern is how sludge deposition affects the practical working volume and final effluent quality. Means of reducing and stabilizing the sludge will be studied with the objective of creating an optimal working volume and preventing future deposits from occurring. Emphasis will be given to the location and relocation of mechanical mixers. One goal of the evaluation is to recommend an operating strategy aimed at reduction of solids in the aeration basin over time. The evaluation will also recommend additional mixers and/or aerators necessary for proper operation of the basin.

SPECIAL CONDITIONS

N. SCHEDULE OF COMPLIANCE (cont'd)

c. Secondary clarifiers - Evaluation of the effectiveness of settling aids in the secondary clarifiers on an annual basis. The purpose of these aids or chemicals is to improve the removal of pollutants so that loadings to the receiving waters are minimized. A settling aid or chemical identified in the trials as effective in secondary clarifiers will be used upon the Department's approval of the study. Trials will be conducted on a regular basis to determine the effectiveness and need for settling aids. If, based on the trials, the permittee concludes that settling aids are not effective or necessary to achieve final effluent limitations in paragraph A, *Effluent Limitations and Monitoring Requirements*, it may submit for the Department's approval a written request to terminate the use of settling aids.

d. Instrumentation - Evaluation for improved monitoring and instrumentation at the wastewater treatment facility. The purpose of these improvements is to provide the maximum information for optimal control of treatment processes. The CPE shall evaluate the usefulness of, among other things, clarifier sludge blanket transmitters, turbidity meters, and regular microbial sludge analysis. In addition, it will provide for ongoing analysis of process control trends, measurement of total phosphorus and ortho-phosphate, and solids inventory control on a real time basis.

Improvements will be implemented on a schedule in the approved CPE, and will be completed as soon as possible in order to ensure compliance with the effluent limits specified in Special Condition A, *Effluent Limitations and Monitoring Requirements*, that become effective June 1, 2010.

2. **On or before December 31, 2005**, ***[PCS Code 95999]*** the permittee shall submit to the Department for review and approval, with or without conditions, a report evaluating the use of phosphorus in the manufacturing process in order to identify and minimize losses to the wastewater treatment facility. Prior to beginning the evaluation, but in no event later than **October 1, 2005**, ***[PCS Code 00701]*** the permittee shall submit to the Department for review and approval a scope of work for the study. This shall include a comprehensive mill-wide mass balance analysis, and will evaluate the phosphorus content of chemicals and materials utilized by the permittee and options for product substitution to reduce the use of phosphorus where feasible. Recommendations for an on-going sewer sampling program with locations and frequencies sufficient to accurately characterize all significant phosphorus loadings to the wastewater treatment facility will be included. The approved evaluation will also contain a program that the permittee will implement to review and minimize the potentially meaningful sources of phosphorus in materials as an ongoing practice through its purchasing practices. Improvements will be implemented on a schedule in the approved report, and will be completed as soon as possible.

SPECIAL CONDITIONS

N. SCHEDULE OF COMPLIANCE (cont'd)

3. **On or before May 1, 2006**, ***[PCS Code 95999]*** the permittee shall submit to the Department for review and approval, with or without conditions, a report of an evaluation of the mill's manufacturing processes conducted by an independent consultant having expertise in the evaluation of pollution control and manufacturing efficiencies in pulp and paper manufacturing. Prior to beginning the study, but in no event later than **October 1, 2005**, ***[PCS Code 00701]*** the permittee shall submit to the Department for review and approval a scope of work for the study. The study shall consider all components of the mill's operations and identify opportunities for reducing pollutant loadings discharged to the wastewater treatment facility. In doing so, emphasis will be placed on comparison of mill's operations to other similar mills that are considered to have low levels of pollutant losses per ton of product. Particular consideration will be given to water use, control of coating materials, BOD5 and TSS on a per ton basis. Attention will be given to all significant waste streams, with emphasis on those having high concentrations of pollutants or volume. The study will take into account contributions from operations at the mill site not under IP's direct control such as the Wausau-Mosinee paper facility, Specialty Minerals' precipitated calcium carbonate plant and Androscoggin Energy's gas turbine operations.

   The manufacturing process study shall also evaluate means of preventing pollutants from entering the mill's sewer system due to spills, upsets or abnormal operating conditions within the manufacturing process. The study shall recommend means for real-time process monitoring (e.g. rate of change alarms) that can be used to prevent pollutants from unnecessarily being lost to the sewer system. Present sewer monitoring programs will be reviewed to ensure that the best possible use is made of continuous in-line monitors at all important locations determined by flows and loads and the resulting information is made available to manufacturing and wastewater treatment personnel on a real-time basis. Changes to manufacturing processes and equipment to reduce the incidence of abnormal events and minimize sewer losses shall be considered.

   The approved report will contain recommendations and time schedules for implementation of projects to reduce water use and the loss of pollutants to the wastewater treatment facility as soon as possible.

4. **On or before June 1, 2006**, ***[PCS Code 00701]*** using information from Special Condition N(3), the permittee shall submit to the Department for review and approval, with or without conditions, a scope or work and schedule to reduce the flow, if necessary, from the waste water treatment facility such that applicable effluent limits in Special condition A, *Effluent Limitations and Monitoring Requirements* effective either January 1, 2010 or June 1, 2010 can be achieved.

SPECIAL CONDITIONS

N. SCHEDULE OF COMPLIANCE (cont'd)

5. In the event that the approved studies/evaluations in Special Conditions N(1-4) indicate that compliance with the final effluent limits in Special Condition A, *Effluent Limitation and Monitoring Requirements,* may not be possible with the existing manufacturing processes and/or waste water treatment plant infrastructure, then **prior to December 31, 2006**, ***[PCS Code53799]*** submit to the Department for review and approval, with or without conditions, a facilities plan for upgrade or replacement of elements of the existing wastewater treatment facility. Such improvements shall be based on then-current information and shall be calculated to provide wastewater treatment necessary to optimize the performance of the treatment system. The facilities plan shall be prepared by an independent consulting engineer having expertise in the treatment of pulp and paper wastewater. The approved plan will contain an implementation schedule with start-up of the new or modified treatment system on or before January 1, 2010 and completion of and have fully operational, all recommended improvements as soon as possible, but in no event later than June 1, 2010.

6. **On or before June 1, 2007**, ***[PCS Code 00199]*** **December 31, 2007,** ***[PCS Code 00299]*** **June 1, 2008,** ***[PCS Code 00399]*** **December 31, 2008** ***[PCS Code 00499]*** **June 1, 2009**, ***[PCS Code 00599]*** and **December 31, 2009** ***[PCS Code 00699]*** the permittee shall submit to the Department, progress reports describing the current performance of the wastewater treatment system, manufacturing and treatment changes occurring in the previous 6-month period, compliance with the terms of this schedule of compliance, improvements proposed for the following 6-month period and the expected results from those improvements.

7. **On or before November 15, 2009**, ***[PCS Code 09699]*** the permittee shall submit to the Department for review and approval, with or without conditions, an updated Operations and Maintenance (O&M) Plan for the waste water treatment facility, as described in Special Condition I, *Operations & Maintenance (O&M) Plan*.

8. **As soon as possible, but in no event later than June 1, 2008,** the permittee shall be in compliance with final limitations for total phosphorus and ortho-phosphorus. **As soon as possible, but in no event later than January 1, 2010**, the permittee shall be in compliance with the final annual average limitation for TSS. **As soon as possible, but in no event later than June 1, 2010,** the permittee shall be in compliance with the 60-day rolling average limitation for TSS and reduce the monthly average discharge flow to not more than 30 MGD, or an alternative flow, as necessary to ensure compliance with those effluent limitations, as determined through the studies and actions pursuant to Special Conditions N(1) through N(4).

SPECIAL CONDITIONS

N. SCHEDULE OF COMPLIANCE (cont'd)

9. At any time during the term of this schedule of compliance, and based on the findings of aforementioned studies/evaluations, effluent monitoring and other information, the permittee may petition the Department to suspend further actions required by this Special Condition. If the Department finds that work done to that point reasonably ensures that permittee is in compliance with any or all final effluent limit(s) pursuant to Special Condition A, *Effluent Limitations and Monitoring Requirements*, the Department will authorize the permittee to suspend further work related to the pollutant(s), provided the permittee remains in compliance with the final effluent limit(s). Nothing in this paragraph may be construed to extend or modify the compliance dates contained herein, or in any way alter final effluent limits. Specifically, suspension of work shall not be considered as a basis for extending the time for compliance with final effluent limits.

10. In the event that, through the reports, studies and or evaluations pursuant to Special Conditions N(1) through N(4) the permittee concludes that final limits for phosphorus cannot be met, the permit may elect to request a Use Attainability Analysis ("UAA") pursuant to 38 M.R.S.A., § 464 and according to guidance provided by the Department and EPA prior to installing such treatment. A request for a UAA, if deemed necessary, will be submitted prior to January 1, 2008 along with all necessary supporting information. If a UAA is requested, this permit may be modified in writing to reflect regulatory findings and actions on the UAA.

P. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results specified by the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information considering ambient water quality conditions.

Q. SEVERABILITY

In the event that any provision, or part thereof, of this permit modification is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

SPECIAL CONDITIONS

R. WAUSAU-MOSINEE (N/F)

Within 5 days of cessation of receiving waste water flows from the Wausau-Mosinee (WM) facility, the permittee shall notify the Department in writing and provide the Department with the status of receiving said waste waters from the WM facility in the future. Should the status result in WM's waste waters not being conveyed to the permittee's waste water treatment facility permanently (more than 90 days), then the limitations in Special Condition A(2) of this permit will become effective at the beginning of the next month of the Discharge Monitoring Report (DMR) period.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **May 11, 2006**

PERMIT NUMBER: **ME0001937**
LICENSE NUMBER: **W000632-5N-G-M**

NAME AND ADDRESS OF APPLICANT:

INTERNATIONAL PAPER COMPANY
Androscoggin Mill
Jay, Maine 04239

COUNTY: **Franklin County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Androscoggin Mill
Jay, Maine 04239

RECEIVING WATER AND CLASSIFICATION: **Androscoggin River/ Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Thomas Saviello, Manager**
Environment, Health & Safety
(207) 897-1422

1. PERMIT SUMMARY

a. Regulatory - Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq., and Maine Law 38 M.R.S.A., Section 414-A et. seq., [more specifically 38 MRSA §§ 414-A(5)(A&B)] and all applicable regulations [more specifically 06-096 CMR Chapter 522(4)], the Department of Environmental Protection (Department hereinafter) is hereby modifying the combination Maine Pollutant Discharge Elimination System MEPDES permit #ME0001937/Maine Waste Discharge License (WDL) #W000623-5N-F-R (permit hereinafter) issued to the International Paper Company (IP hereinafter), on September 21, 2005. It is noted all other terms and conditions of the September 2005 permit not modified by this permitting action remain in effect and enforceable.

38 MRSA 414-A, §5 *Modification, reopening and revocation* states *"The following actions may be taken to reopen, modify or revoke and reissue waste discharge licenses. All actions taken under this subsection must be with notice to the licensee and all other interested parties of record and with opportunity for hearing. Actions may be appealed as set forth in sections 341-D and 346.*

1. PERMIT SUMMARY

A. The department may reopen a license to add or change conditions or effluent limitations for toxic compounds identified in 40 Code of Federal Regulations, Section 401 or to include schedules of compliance to implement industrial pretreatment rules adopted by the board. Additionally, at the time of license issuance, the department may include as a condition of a license a provision for reopening the license for inclusion or change of specific limitations when facts available upon issuance indicate that changed circumstances or new information may be anticipated.

B. A request for modification of a license may be made by the licensee for any valid cause or changed circumstance. The department may initiate a license modification:

(1) When necessary to correct legal, technical or procedural mistakes or errors;

(2) When there has been or will be a substantial change in the activity or means of treatment that occurred after the time the license was issued;

(3) When new information other than revised rules, guidance or test methods becomes available that would have justified different conditions at the time the license was issued;

(4) When a pollutant not included in the license may be present in the discharge in quantities sufficient to require treatment, such as when the pollutant exceeds the level that can be achieved by the technology-based treatment standards appropriate to the licensee, or contribute to water quality violations;

(5) When necessary to remove net limits based on pollutant concentration in intake water when the licensee is no longer eligible for them, consistent with federal law;

(6) When necessary to make changes as a result of the failure of one state to notify another state whose waters may be affected by a discharge; or

(7) When necessary to include pretreatment compliance schedules required pursuant to federal law.

Department rule 06-096 CMR, Chapter 522, §4, *Modification, revocation and reissuance, or termination of permits* states in part;

(a) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Department's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in 38 MRSA § 414-A(5). All requests shall be in writing and shall contain facts or reasons supporting the request.

1. PERMIT SUMMARY (cont'd)

(c)(2) In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.

b. Terms and Conditions - The Department is modifying the September 21, 2005 permit to incorporate more stringent water quality based mass limitations for biochemical oxygen demand (BOD_5), more stringent interim water quality based limits for total phosphorus and ortho-phosphorus and modifying the schedules to come into compliance with water quality based mass limitations for total suspended solids (TSS), total phosphorus and ortho-phosphorus. The permit also provides for reductions in BOD_5, TSS and total phosphorus should IP cease treating process waste waters from the Wausau-Mosinee facility. The modifications are as follows:

1. Reducing the summertime (June 1 – September 30) monthly average, weekly average and daily maximum mass limitations for BOD_5 from 7,400 lbs/day, 11,100 lbs/day and 13,875 lbs/day respectively, to 4,500 lbs/day, 6,400 lbs/day and 8,000 lbs/day respectively, and establishing the limitations as year-round limitations rather than seasonal.

2. Modifying the final dates in the schedules for compliance with the final summertime 60-day rolling average TSS mass limitation of 10,000 lbs/day from June 1, 2015 to June 1, 2010 and the final annual average TSS mass limitation of 14,738 lbs/day from January 1, 2015 to January 1, 2010.

3. Reducing the monthly average mass limit (beginning upon issuance of the permit) for total phosphorus from 193 lbs/day to 150 lbs/day and reducing the monthly average mass limit for ortho-phosphorus from 44 lbs/day to 33 lbs/day.

4. Modifying the final date in the schedule of compliance for the summertime total phosphorus and ortho-phosphorus mass limitations of 130 lbs/day and 22 lbs/day respectively, from June 1, 2015 to June 1, 2008.

5. Reducing the quantity of oxygen that IP is required to inject into Lower Narrows from 24,891 lbs/day to 14,891 lbs/day. It is noted the schedule of compliance associated with this requirement has been stayed by the Board of Environmental Protection (Board) until the Board makes a decision on the appeal of the 9/21/05 permit.

6. Incorporating a provision in the permit that reduces mass limitations for BOD_5, TSS and total phosphorus should the waste water from the Wausau-Mosinee facility in Livermore Falls no longer be treated at the IP waste water treatment facility.

1. PERMIT SUMMARY (cont'd)

c. History: - The most recent significant and relevant regulatory actions for the IP permit are as follows:

1. *September 21, 2005* - The Department issued MEPDES permit #ME0001937/WDL #W000623-5N-F-R for a five year term.

2. *October 21, 2005* – IP and several interested parties filed timely appeals of the IP permit with the Board of Environmental Protection (Board).

3. *March 22, 2006* – The Board issued a Motion To Stay Procedural Order that stayed Special Condition K, *Gulf Island Pond Oxygen Injection Operation*, §b, *Schedule of Compliance*. The motion order stayed the schedule of compliance until the Board issues a decision on the appeal of the permit at which time the Board would establish a new compliance of schedule.

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

Outfall #001 (Final effluent)

a. Biochemical oxygen demand (BOD_5) – The Fact Sheet of the September 21, 2005 permit included the following italicized text; *Beginning upon issuance of the permit, the summertime (June 1 – September 30) monthly average water quality based BOD limit of 7,400 lbs/day as recommended in the May 2005 TMDL is being established to maintain compliance with the 30-day rolling average dissolved oxygen criteria of 6.5 mg/L at 22^o C. The weekly average and daily maximum water quality based limits of 11,100 lbs/day and 13,875 lbs/day respectively, as recommended in the May 2005 TMDL are being established to maintain compliance with the minimum dissolved oxygen standard of 5.0 mg/L. The daily maximum limitation of 13,875 lbs/day was derived by multiplying the recommended weekly average of 11,100 lbs/day limitation by a statistically derived factor of 1.25. This factor was derived based on a statistical evaluation of the mills historic effluent variability. The non-summer monthly average and daily maximum limitations of 17,700 lbs/day and 34,050 lbs/day respectively are being carried forward from the previous licensing action pursuant to anti-backsliding provisions of Department rule (Chapter 523 §5(1) and federal regulation (USC §1342(o).*

A summary of the BOD limitations in this permitting action is as follows:

	Monthly Average	*Weekly Average*	*Daily Maximum*
June 1 – Sept 30 Beginning upon issuance	*7,400 lbs/day*	---	*13,875 lbs/day*
June 1 – Sept 30 Beginning June 1, 2006	*7,400 lbs/day*	*11,100 lbs/day*	*13,875 lbs/day*
Oct 1 – May 31	*17,700 lbs/day*	---	*34,050 lbs/day*

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001 (Final effluent)

Pursuant to Maine law 38 M.R.S.A. §414-A(5)(B)(1), the Department is initiating this modification in part to correct procedural and technical mistakes that were made in establishing the BOD_5 limitations in the September 21, 2005 permit. A review of the Department's files for the IP facility indicates IP repeatedly requested more stringent monthly average and daily maximum mass limits for BOD_5. In a cover letter dated January 8, 1999 attached to its application for license renewal, IP stated, " *In response to water quality issues related to Gulf Island Pond and FERC hydrostation relicensing, International Paper requests the following permit limits:*

Effluent Parameter	*Monthly Average (lbs/day)*	*Daily Maximum (lbs/day)*
BOD_5	*4,500 lbs/day*	*8,000 lbs/day*
TSS (5/1-9/30) [1]	*12,000 lbs/day*	*22,300 lbs/day*
TSS (10/1 – 4/30) [1]	*31,330 lbs/day*	*44,600 lbs/day*
TSS (10/1 – 4/30) [2]	*25,000 lbs/day*	*44,600 lbs/day*

(1) Effective October 1, 1999 – implementation date of FERC license.
(2) Effective October 1, 2002.

These limits are the same as proposed in International Paper's draft XL application to the U.S.EPA, dated December 30, 1998."

In a letter dated May 28, 1999 to Gregg Wood of the Department commenting on a draft permit modification, IP stated "*International Paper does not agree with these proposed limits for BOD_5. We request the following permit limits:*

Effluent Parameter	*Monthly Average (lbs/day)*	*Daily Maximum (lbs/day)*
BOD_5	*4,500 lbs/day*	*8,000 lbs/day*

These limits are the same as proposed in International Paper's draft XL application to the U.S.EPA, dated December 30, 1998 and International Paper's SPDES renewal application dated January 8, 1999." It is the Department's understanding IP proposed these values based on a statistical evaluation of its historic effluent BOD_5 data.

The September 21, 2005 MEPDES permit issued to IP was in error by establishing less stringent limitations than requested by IP in its 1/8/99 application for permit renewal and its 5/28/99 letter. The Department also failed to give adequate consideration to IP's historic BOD effluent data. Therefore, to correct the procedural and technical mistakes, this permit modification is establishing more stringent water quality based monthly average and daily maximum BOD_5 limitations of 4,500 lbs/day and 8,000 lbs/day, respectively.

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001 (Final effluent)

As is explained in more detail below, the Department has independently examined these limits and concluded they are appropriate under governing statutory criteria.

As for the weekly average limit, the September 21, 2005 Fact Sheet contained the following text "*The weekly average and daily maximum water quality based limits of 11,100 lbs/day and 13,875 lbs/day respectively, as recommended in the May 2005 TMDL are being established to maintain compliance with the minimum dissolved oxygen standard of 5.0 mg/L. The daily maximum limitation of 13,875 lbs/day was derived by multiplying the recommended weekly average limitation of 11,100 lbs/day by a statistically derived factor of 1.25. This factor was derived based on a statistical evaluation of the mills historic effluent variability.*

To be consistent with the methodology for statistically deriving the daily maximum and weekly average limitations in the September 21, 2005 permit, this permit modification is establishing a weekly average limitation of 6,400 lbs/day. The limit was derived by mathematically dividing the daily maximum limitation of 8,000 lbs/day requested by IP by a factor of 1.25. The limitations are in effect on a year-round basis as requested by IP in its 1/8/99 application for permit renewal and letter dated 5/28/99, and as supported by IP's historic effluent data.

A summary of the BOD5 limitations in this permitting action are as follows:

Parameter	Monthly Average	Weekly Average	Daily Maximum
BOD5 Beginning upon issuance	4,500 lbs/day	6,400 lbs/day	8,000 lbs/day

IP has demonstrated the limitations established in this permit modification are achievable through proper operation of its waste water treatment facility. See Attachment A to this Fact Sheet for a graphical presentation of the limitations superimposed on the historic effluent BOD_5 data reported to the Department dating back to at least September of 1994. The graphs indicate that with the exception of the summers of 2003 and 2004, IP has been in substantial compliance with the BOD_5 limitations in this permitting action dating back to 1994. For the summer of 2003, the Department's review of information pertaining to mixed liquor suspended solids [(MLSS) a measure of the biomass of the biological community in the aeration that breaks down the waste] during this time period indicate these conditions were likely attributed to MLSS levels that were 50%-70% lower than normal operating conditions. Lack of sufficient biomass in the aeration basin at that time likely lead to BOD_5 being discharged rather than being treated by the resident biological community. As for the summer of 2004, the MLSS were on the opposite end of the spectrum in that concentration levels were over two times higher than normal operating conditions (over abundance of biomass) due to dredging of the aeration basin which resulted in re-suspension of solids, thus elevated discharge levels of BOD_5. Other

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001 (Final effluent)

than these two episodes along with a couple other minor incidents in the fall of 2000 and 2002, the spikes in BOD_5 discharges were the result of aberrant conditions and IP's full record of discharge data demonstrates that the limits in this permitting action are achievable without a schedule of compliance.

It is noted the reduction in the monthly average limit for BOD_5 in this permitting action has no effect on the quantity of oxygen required to be injected into Gulf Island Pond based on the May 2005 TMDL. As for the new weekly average limit, the reduction from 11,100 lbs/day to 6,400 lbs/day does correspond to a reduction of 10,000 lbs/day of oxygen that needs to be injected into the Lower Narrows area of the Androscoggin River. This reduction is based on holding the quantity of oxygen to be injected at Upper Narrows at 105,000 lbs/day as is required in the 9/21/05 permit. Because IP is the only entity with a reduction in permit limits, IP is the only entity being compensated for the reduction in the oxygen injection. Therefore, IP's oxygen injection requirements at Lower Narrows has been reduced from 24,891 lbs/day to 14,891 lbs/day.

b. Total suspended solids (TSS) - The Fact Sheet of the September 21, 2005 permit included the following italicized text;

This permit establishes seasonal monthly average, 60-day average and annual average water quality based limitations for TSS. Special Condition A, Effluent Limitations and Monitoring Requirements, of this permit establishes a ten-year schedule to come into compliance with the final water quality based limitations for TSS. Maine law 38 M.R.S.A. §414(2) Schedules of Compliance, authorizes the Department to establish schedules of compliance for water quality based limitations within the terms and conditions of a license. The schedule may include interim and final dates for attainment of specific standards and must be as short as possible based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards. In addition Department rule Chapter 523, Waste Discharge License Conditions, § Section 7, Schedules of Compliance, states in part, "if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement. See Special Condition N, Schedule of Compliance, of this permit for specifics on the tasks and deadlines within the ten-year schedule.

In enacting revisions to portions of Maine law 38 M.R.S.A, §465 (as amended via P.L. 2005, Chapter 409), the State Legislature found that "the mitigation of water quality impairments on certain Class C waters requires extraordinary limitations on the discharge of certain pollutants, including phosphorus, that will reasonably necessitate longer than usual time frames for implementation."

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

This permitting action establishes a ten-year schedule of compliance in Special Condition N, Schedule of Compliance. Though short-term TSS reductions have traditionally been accomplished through the addition of settling aids to the secondary clarifiers, the permittee must evaluate much more than just settling aids to meet the long term reductions specified in this permitting action. Achieving technologically cost-effective long term TSS reductions as well as other pollutant loading reductions such as total and ortho-phosphorus will entail much broader investigations/evaluations into the mill's manufacturing processes, spill control plans, a phosphorus mass balance for the mill, pollution prevention and a comprehensive performance evaluation (CPE) of the waste water treatment facility to name a few. Based on the collective list of studies and evaluations listed in Special Condition N of this permit, the Department has deemed a schedule of ten-years to be necessary and is as short as possible based on consideration of the technological, economic and environmental impact of the steps necessary to meet TSS limitations in this permit.

The final summertime monthly average limit of 12,000 lbs/day is based on a May 1998 Section 401 water quality certification for IP's hydro facilities and is consistent with the Town of Jay's Permit #5. The final non-summertime monthly average limitation of 25,000 lbs/day is being carried forward from the previous licensing action pursuant to anti-backsliding provisions of Department rule (Chapter 523 §5(1) and federal regulation (USC §1342(o).

The final summertime 60-day average (June 1 – September 30) limitation of 10,000 lbs/day (effective June 1, 2015) is being established as a TMDL recommended limit to mitigate the adverse affects of settleable solids on the macro-invertebrate community in the Livermore Falls impoundment. An interim limit of 12,000 lbs/day (consistent with the previous licensing action) is in effect upon issuance of the permit and 11,060 lbs/day (negotiated between the Department and the permittee based on past performance) becomes effective June 1, 2010, five years after permit issuance.

The final summertime and non-summertime daily maximum limitations of 22,300 lbs/day and 44,600 lbs/day respectively, are based on a May 1998 Section 401 water quality certification for IP's hydro facilities and is consistent with the Town of Jay's Permit #5. These limits are in effect upon issuance of the permit.

The final annual average limitation of 14,738 lbs/day is a TMDL recommended limit and is being established to reduce the contribution of sediment oxygen demand to non-compliance in GIP. Interim limits of 17,557 lbs/day and 16,000 lbs/day (negotiated between the Department and the permittee based on past performance) become effective upon permit issuance and June 1, 2010, respectively. It is noted the approved TMDL establishes trading ratios for TSS if mills choose to do so. Should the permittee request to do so, the Department will consider pollutant trading in accordance with EPA's

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

January 13, 2003, Water Quality Trading Policy. The TMDL has established the trading caps for specific pollutant loadings to GIP to meet water quality standards as well as trading ratios between discharges based on their proximity to GIP and other dischargers.

A summary of the TSS limitations in this permitting action are as follows:

	Monthly Avg.	*60-Day Avg.*	*Annual Avg.*	*Daily Maximum*
June 1 – Sept 30				
Upon permit issuance	*12,000 lbs/day*	---	---	*22,300 lbs/day*
June 1 – Sept 30				
Beginning June 1, 2006	*12,000 lbs/day*	*12,000 lbs/day*	*17,557 lbs/day*	*22,300 lbs/day*
Beginning June 1, 2010	*12,000 lbs/day*	*11,060 lbs/day*	*16,000 lbs/day*	*22,300 lbs/day*
Beginning June 1, 2015	*12,000 lbs/day*	*10,000 lbs/day*	*14,738 lbs/day*	*22,300 lbs/day*
Oct 1 – May 31				
Beginning October 1, 2005	*25,000 lbs/day*	*N/A*	---	*44,600 lbs/day*
Oct 1 – May 31				
Beginning January 1, 2006	*25,000 lbs/day*	*N/A*	*17,557 lbs/day*	*44,600 lbs/day*
Oct 1 – May 31				
Beginning January 1, 2010	*25,000 lbs/day*	*N/A*	*16,000 lbs/day*	*44,600 lbs/day*
Beginning January 1, 2015	*25,000 lbs/day*	*N/A*	*14,738 lbs/day*	*44,600 lbs/day*

Department rule Chapter 523, Waste Discharge License Conditions, § Section 7, Schedules of Compliance, states in part, "if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.

(i) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.

(ii) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Special Condition N, Schedule of Compliance, of this permit sets forth interim requirements (in the form of studies/evaluations) and dates for achieving said studies/evaluations pursuant to Chapter 523. In addition, Special Condition N establishes submission of progress reports to the Department every six months for the term of the ten-year schedule.

The final effluent limits for TSS may be changed, consistent with governing statutes and regulations, by subsequent permit modifications or renewals issued by the Department resulting from revisions to the TMDL or other new information. Any such changes must meet anti-backsliding requirements contained in Department rules, Chapter 523, §5(l) and 33 U.S.C. §1342(o).

Pursuant to Maine law 38 M.R.S.A. §414-A, §§(5)(B)(1&3), *Modification, Reopening and Revocation*, the Department is initiating this modification in part to correct a technical mistake that was made in establishing the schedule of compliance with limitations for TSS in the September 21, 2005 permit and based in part on new information obtained subsequent to the issuance of the September 21, 2005 permit.

Special Condition N, *Schedule of Compliance*, §1 of the September 21, 2005 permit required IP to submit a Comprehensive Performance Evaluation ("CPE") of the wastewater treatment facility with particular emphasis given to evaluation of the primary and secondary clarifiers, aeration basin and instrumentation. For the primary clarifiers, the evaluation was to focus on the effectiveness of settling aids or other chemicals in the primary clarifiers. The purpose of these aids or chemicals is to improve the removal of pollutants so that loadings to the secondary treatment system are minimized. For the aeration basin, Special Condition N(1) required "*Evaluation of all aspects of the physical and biological operations of the basin in order to optimize its performance in the treatment process. Of particular concern is how sludge deposition affects the practical working volume and final effluent quality. Means of reducing and stabilizing the sludge will be studied with the objective of creating an optimal working volume and preventing future deposits from occurring. Emphasis will be given to the location and relocation of mechanical mixers. One goal of the evaluation is to recommend an operating strategy aimed at reduction of solids in the aeration basin over time. The evaluation will also recommend additional mixers and/or aerators necessary for proper operation of the basin.*" For the secondary clarifiers, the evaluation was to focus on the effectiveness of settling aids in the secondary clarifiers on an annual basis.

On March 1, 2006, IP submitted a CPE to the Department to comply with Special Condition N of the permit. In short, IP has shown the high inventory of solids in the aeration basin along with a mode of operation of the biological treatment component of the waste water treatment facility as an activated sludge treatment system has proven not to be conducive to efficient TSS removal. One of the mechanisms by which IP controls

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

the discharge of TSS is the use of polymer to enhance settling during the summer months (June – September). Attachment B of this Fact Sheet is a graphical presentation of the IP's monthly average TSS discharged from September 1994 through September 2005. The graph clearly illustrates a cyclical pattern where during the non-summer months TSS is routinely discharged at or above 20,000 lbs/day and during the summer months when polymer is in use, discharge of TSS is routinely at or below 10,000 lbs/day. Polymer is occasionally used outside of the summer months when incidents whereby elevated levels of pollutant loadings to the treatment plant such as paper coating materials (fine colloidal particles that tend not to settle readily) used in the papermaking process are conveyed to the waste water treatment facility or settled solids in the aeration basin are disturbed, re-suspended and then carried through the secondary clarifiers and eventually discharged. These scenarios have likely been the root cause for historic episodic spikes of TSS discharged. Polymer use is generally considered by the waste water treatment industry as a temporary measure to enhance settling and not a long-term solution as it tends to be expensive, disruptive of the treatment process and without modification to the treatment system, a necessity on an on-going basis.

IP's aeration basin is currently configured such that mechanical aerators are distributed throughout the basin in an attempt to provide uniform mixing and aeration to maintain a consistent mixed liquor suspended solids (MLSS). IP has identified a scenario in which the aeration basin can be physically split by a curtain or other similar measure(s) to provide for a large quiescent equalization cell followed by an activated sludge cell created by concentrating the mechanical aerators into a smaller area to enhance biological treatment. The equalization cell will provide a large area for the influent to the basin to become homogeneous prior to being subjected to biological treatment in the activated sludge cell.

The CPE states that the scenario of reconfiguring the existing aeration basin will require a schedule of compliance that ranges from 46 to 58 months (without accounting for Department review time) beginning after receiving review comments by the Department on the CPE. In keeping with Maine law 38 M.R.S.A. §414(2) *Schedules of Compliance*, in that schedules must be as short as possible based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards, the Department believes there is at least one alternative scenario it has evaluated (a new aeration basin) that can be constructed and ready for start-up on or before January 1, 2010. This would give the permittee five (5) months operational experience with the new treatment system before more stringent final summertime limitations become effective on June 1, 2010.

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Therefore, the Department is modifying the schedule for compliance with the final TSS limits established in the September 21, 2005 permit taking into consideration historic effluent data and the technological, economic and environmental impact of the steps necessary to attain those standards such as modification(s) to the existing aeration basin or the construction of a new or supplemental aeration basin. This permit modification establishes January 1, 2010 as a date for start-up of a modified or new aeration basin (or combination thereof) and June 1, 2010, as a date by which IP shall comply with the final 60-day rolling average limitation.The limitations and the schedule of compliance are as follows:

	Monthly Avg.	60-Day Avg.	Annual Avg.	Daily Maximum
June 1 – Sept 30				
Upon permit issuance	12,000 lbs/day	12,000 lbs/day	17,557 lbs/day	22,300 lbs/day
Beginning June 1, 2010	12,000 lbs/day	10,000 lbs/day	14,738 lbs/day	22,300 lbs/day
Oct 1 – May 31				
Upon permit issuance	25,000 lbs/day	N/A	17,557 lbs/day	44,600 lbs/day
Beginning January 1, 2010	25,000 lbs/day	N/A	14,738 lbs/day	44,600 lbs/day

c. Total phosphorus and Ortho-phosphorus – The Fact Sheet of the September 21, 2005 permit contained the following text;

This permitting action is establishing seasonal (June 1 – September 30) monthly average water quality based limitations for total phosphorus and ortho-phosphorus limitations. The final monthly average limits of 130 lbs/day (total P) and 22 lbs/day (ortho-P) are based on the recommendations in the May 2005 final TMDL and were derived based on mass discharge quantities for both parameters for the period May 1 – September 30, 2004. This permitting action establishes a ten-year schedule of compliance with said limits and establishes monthly average interim limits of 193 lbs/day (total P) and 44 lbs/day (ortho-P) upon permit issuance and monthly average limits of 160 lbs/day (total P) and 33 lbs/day (ortho-P) beginning June 1, 2010. The interim limitations were negotiated limits between the Department and permittee. As with TSS, Special

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Condition N, Schedule of Compliance, of this permit sets forth interim requirements (in the form of studies/evaluations) and dates for achieving said studies/evaluations pursuant to Chapter 523.

The permittee has indicated that the final total and ortho phosphorus levels were achieved in the late summer of 2004, but the waste water treatment facility was extremely unstable due to the lack of nutrients to sustain a healthy biological community in the aeration basin. The permittee has indicated that there has been insufficient opportunity at the waste water treatment facility to observe if these nutrients levels are adequate to continuously to sustain a healthy biological community in the aeration basin during summer temperatures. This permitting action also establishes a seasonal (June 1 – September 30) monthly average and daily maximum reporting requirement for concentration as well as a monitoring frequency of 3/Week for both parameters to track discharge performance.

At the permittee's written request, the Department may approve another combination of total phosphorus and ortho-phosphorus discharge limits that is equally protective of water quality in the Gulf Island Pond. A written request shall be based on the methods of evaluation used in the TMDL.

As with TSS, this permitting action is establishing a ten-year schedule of compliance for total phosphorus and ortho-phosphorus limits in this permitting action. The limits for ortho-phosphorus that become effective on June 1, 2015, are likely the most stringent phosphorus limits for a pulp and paper mill in the United States. Achieving technologically cost-effective long term phosphorus reductions will entail much broader investigations/evaluations into the mill's manufacturing processes, spill control plans, a phosphorus mass balance for the mill, pollution prevention and a comprehensive performance evaluation (CPE) of the waste water treatment facility to name a few. Based on the collective list of studies and evaluations listed in Special Condition N of this permit, the Department has deemed a schedule of ten-years to be necessary and is as short as possible based on consideration of the technological, economic and environmental impact of the steps necessary to meet some combination of total phosphorus and ortho-phosphorus limitations in this permit.

The final effluent limits for total phosphorus or ortho-phosphorus may be changed, consistent with governing statutes and regulations, by subsequent permit modifications or renewals issued by the Department resulting from revisions to the TMDL or other new information. Any such changes must meet anti-backsliding requirements contained in Department rules, Chapter 523, §5(l) and 33 U.S.C. §1342(o).

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Pursuant to Maine law 38 M.R.S.A. §414-A(5)(B)(3), the Department is initiating this modification in part to modify the monthly average mass limits and associated schedule of compliance with said limits based on new information regarding discharge levels of total phosphorus and ortho-phosphorus subsequent to the issuance of the September 21, 2005 permit.

Prior to issuance of the September 21, 2005 permit, IP was not required to monitor and report test results for total phosphorus and ortho-phosphorus to the Department. Between 9/21/05 and 9/30/05, IP sampled and reported total phosphorus and ortho-phosphorus values to the Department that called into question IP's schedule of compliance. IP submitted all of it's phosphorus data dating back to the summer of 2004. See Attachment C of this Fact Sheet for a graphical presentation of the data for the summers of 2004 and 2005. It is noted (with the exception of the month of June 2004) the monthly average values depicted on the graphs are based on 8-14 data points per month.

In addition to effluent data for phosphorus, the Department has reviewed two reports submitted to the Department by IP pursuant to Special Condition N, *Schedule of Compliance*, §§1 & 2 of the September 21, 2005 permit. Section N(1) required IP to submit a Comprehensive Performance Evaluation ("CPE") of the wastewater treatment facility and §N(2) required IP to submit a report evaluating the use of phosphorus in the manufacturing process in order to identify and minimize losses to the wastewater treatment facility.

As it relates to phosphorus, the purpose of the two reports was to identify source(s) of phosphorus in the pulp and papermaking processes and the waste water treatment plant's ability to remove phosphorus prior to discharge to the Androscoggin River. IP has identified the aeration basin of the waste water treatment facility as being the primary source of phosphorus that is discharged. Phosphorus has an affinity for solids, thus the solids in the aeration basin act as a sink for phosphorus. When settled solids in the aeration basin are disturbed, the re-suspended solids (soluble and insoluble) are carried through the secondary clarifiers and eventually discharged. A high inventory of solids in the aeration basin is contributing to elevated discharge levels of TSS, thus the discharge of phosphorus. IP's CPE evaluated different scenarios to provide a higher level of treatment to mitigate the discharge of TSS and phosphorus. See the discussion in Section of 5(b) of this Fact Sheet. Based on the 2004 and 2005 phosphorus effluent data, IP has successfully been able to control the discharge of phosphorus even though treating for solids remains problematic.

2. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

The Department has made the determination that the interim limitations are not justifiable under governing statutory criteria and IP does not need a ten-year schedule of compliance for the final limits of 130 lbs/day for total phosphorus and 22 lbs/day for ortho-phosphorus as established in the September 21, 2005 permit. Therefore, this permit modification is establishing new interim monthly average mass limitations for total phosphorus and ortho-phosphorus and establishing a new schedule of compliance based on a best professional judgment by the Department taking into consideration historic effluent data and the technological, economic and environmental impact of the steps necessary to attain those standards.

A summary of the phosphorus limitations in this permitting action are as follows:

Parameter	Monthly Average
Total phosphorus	
Beginning upon issuance	150 lbs/day
Beginning June 1, 2008	130 lbs/day
Ortho-phosphorus	
Beginning upon issuance	33 lbs/day
Beginning June 1, 2008	22 lbs/day

In addition to modifying limitations and schedules of compliance for BOD_5, TSS and phosphorus, this permit is modifying the terms and conditions of Special Condition N, Schedule of Compliance to coincide with the limits and schedules modified above.

3. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM

The Fact Sheet of the September 21, 2005 Fact Sheet contained the following italicized test;

In 1989, the Department proposed a partial resolution of the summertime dissolved oxygen deficit at GIP through the development of draft permits/licenses for Boise Cascade (BC) (formerly MeadWestvaco and now RPC) and International Paper (IP) requiring somewhat more stringent summer limits than the prior year round permit/license limits, although the new summer limits that required production process changes and/or construction of additional treatment facilities. Between November 1990 and January 1991, the State of Maine, BC and IP executed Consent Agreements requiring those companies to build and operate an oxygen injection facility at River Mile (RM) 31.4 on the Androscoggin River approximately 5 miles above the GIP dam. The Consent Agreement required the system to be in place and operational by June 1, 1992. As a minimum, 27,000 lb/day of oxygen would be injected continuously during the period July 1 through September 30 each year.

3. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

In addition to BC and IP, Central Maine Power Company [now Florida Power Light & Energy (FPLE)] and James River (now Fraser Paper NH LLC) in Berlin/Gorham, N.H. were parties to the construction of the oxygenation project and are presently responsible parties in the operation and maintenance of the system. These four entities have formed a partnership and have signed a contractual agreement amongst themselves outlining the responsibilities of each party. To date, the consent agreement conditions have been met and the system has operated as designed.

In June of 1999, the Department modified the licenses for MeadWestvaco and IP by establishing a "sliding scale" for oxygen injection as a function of both river flow and ambient river flow temperature. This modification was necessary as a seasonal (July 1 – September 30) steady state injection of 73,000 lbs/day of oxygen into the river (regardless of river flow or river temperature) resulted in oxygen being wasted when the river flow was high and or the ambient river temperature was low and a not enough oxygen being injected when the river flow was low and or the ambient river temperatures were high.

Based on the May 2005 final TMDL, the Department has determined that as a default, a steady state injection of 105,000 pounds per day of oxygen is required (assuming a 33% transfer efficiency) at two locations in Gulf Island Pond; one at Upper Narrows (location of the existing oxygenation system) and one at Lower Narrows, approximately 3 miles downstream of the Upper Narrows system. The Lower Narrows location is important as the water depth is deeper than the Upper Narrows site. An oxygenation system located deeper in the pond and closer to the area of sub-standard ambient dissolved oxygen will provide an opportunity for oxygen injection system to more effective in improved ambient dissolved oxygen levels.

To date, the Department has not received a proposal from the permittee and/or other parties to collectively design and construct a new system at Lower Narrows and or modify the existing oxygenation system to satisfy the TMDL's default oxygenation injection at Upper Narrows recommendations. Therefore, the Department established oxygen injection requirements for each entity via the MEPDES, NPDES permits and the Section 401 Water Quality Certification taking into consideration individual mill's impact on dissolved oxygen deletion based on loadings of phosphorus, BOD and TSS to GIP, and the dam's effect on dissolved oxygen as well as individual's contractual obligations for the existing oxygenation system at Upper Narrows.

It is the Department's understanding at the time of this permitting action, the contractual agreement for the operation and maintenance of the existing oxygenation system at Upper Narrows is as follows: FPLE 14%, Fraser 10%, RPC 38% and IP 38%. Based on collective loadings of phosphorus, BOD and TSS that are representative of current discharges levels and assimilation rates for each parameter, the Department has determined the individual percentages of pollutant loading to GIP are Fraser 20.13%, RPC, 32.64% and IP 47.23%.

3. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

The May 2005 final TMDL indicates with zero discharge from the pulp and paper mills, oxygen injection is still required due to dissolved oxygen deficiencies caused by sediment oxygen as a result of the presence of the Gulf Island Dam. Modeling for the TMDL indicates that to offset this dissolved oxygen deficiency, FPLE would be required to inject 105,000 lbs/day of oxygen at Upper Narrows (present system) or inject 65,000 lbs/day of oxygen at Lower Narrows. Therefore, only 0.619 lbs of oxygen is required at Lower Narrows for every 1.0 lb of oxygen at Upper Narrows (65,000/105,000 = 0.619).

In an effort to distribute oxygen injection based on loadings to GIP, (at the same time recognizing parties contractual obligations), the Department has assigned oxygen requirements for each entity based on collectively injecting 105,000 lbs/day at Upper Narrows and 105,000 lbs/day at Lower Narrows. The oxygen injection requirements for each entity were derived as follows:

Upper Narrows:

Allocation by contractual obligation

FPLE (14%)	*105,000 lbs (0.14) = 14,700 lbs*
Fraser (10%)	*105,000 lbs (0.10) = 10,500 lbs*
RPC (38%)	*105,000 lbs (0.38) = 39,900 lbs*
IP (38%)	*105,000 lbs (0.38) = 39,900 lbs*

Allocation by percent pollutant loading to GIP

FPLE fixed at 14,700 lbs ⇒105,000 lbs – 14,700 lbs = 90,300 lbs to be split between mills.

Fraser (20.17%)	*90,300 lbs (0.2017) = 18,177 lbs*
RPC (32.64%)	*90,300 lbs (0.3264) = 29,474 lbs*
IP (47.23%)	*90,300 lbs (0.4723) = 42,648 lbs*

Difference between contractual and percent pollutant loading

FPLE fixed at 14,700 lbs

Fraser	*10,500 lbs – 18,177 lbs = (7,677 lbs)*
RPC	*39,900 lbs – 29,474 lbs = 10,426 lbs*
IP	*39,900 lbs – 42,648 lbs = (2,748 lbs)*

3. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

Lower Narrows

Being that FPLE would be responsible for 105,000 lbs of oxygen injection at Upper Narrows with the mills at zero discharge and is contractually only contributing 14% to the Upper Narrows, the Department has assigned the remaining portion of that obligation at Lower Narrows. It is noted that only 0.619 lbs of oxygen is required at Lower Narrows for every 1.0 lb of oxygen at Upper Narrows.

FPLE's responsibility at Lower Narrows: (105,000 lbs – 14,700 lbs)(0.619) = 55,900 lbs. 105,000 lbs – 55,900 lbs = 49,100 lbs to be allocated between the mills.

Allocation for the three mills based on pollutant loading to GIP
FPLE fixed at 55,900 lbs
Fraser 49,100 lbs (0.2017) = 9,884 lbs
RPC 49,100 lbs (0.3264) = 16,026 lbs
IP 49,100 lbs (0.4723) = 23,190 lbs

Re-allocation for the three mills considering over or under compensation at Upper Narrows
FPLE fixed at 55,900 lbs
Fraser 9,884 lbs + 7,677(0.619) lbs = 14,636 lbs
RPC 16,026 lbs – 10,426(0.619) lbs = 9,570 lbs
IP 23,190 lbs + 2,748(0.619) lbs = 24,891 lbs

Re-allocation expressed as a percentage of the total of 105,000 lbs
FPLE 55,900 lbs/105,000 lbs = 53.2%
Fraser 14,636 lbs/105,000 lbs = 13.9%
RPC 9,570 lbs/105,000 lbs = 9.1%
IP 24,891 lbs/105,000 lbs = 23.8%

3. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

Summary of Oxygen Injection

A summary of oxygen injection requirements (assuming the TMDL default allocation of 105,000 lbs/day at Upper Narrows and 105,000 lbs/day at Lower Narrows) based on pollutant loading to GIP, compensation for existing oxygen injection at Upper Narrows to offset pollutant loading to GIP and the existing contractual obligation of the partnership for the existing system at Upper Narrows is as follows:

Upper Narrows		***Lower Narrows***	
FPLE	*14,700 lbs*	*FPLE*	*55,900 lbs*
Fraser	*10,500 lbs*	*Fraser*	*14,636 lbs*
RPC	*39,900 lbs*	*RPC*	*9,570 lbs*
IP	*39,900 lbs*	*IP*	*24,891 lbs*

Special Condition K, Gulf Island Pond Oxygen Injection Requirements, of this permit also provides IP with a mechanism to individually or in conjunction with other parties, propose an alternate oxygen injection system(s) that satisfies the oxygen injection requirements as recommended in the May 2005 final TMDL.

As a result of the reduction in IP's weekly average mass limitation for BOD_5, from 11,100 lbs/day to 6,400 lbs/day, IP is being credited with a reduction in the quantity of oxygen that is required to be injected in Lower Narrows. According to the most recent modeling by the Department, the more stringent limitation resulted in an overall oxygen injection reduction at Lower Narrows from 105,000 lbs/day down to 95,000 lbs/day or 10,000 lbs/day lower than the requirement in the September 21, 2005 permit.

Lower Narrows

Being that IP is the only entity with a reduction in permit limits, IP is the only entity being compensated for the reduction in the oxygen injection. Therefore, IP's oxygen injection requirements at Lower Narrows have been reduced from 24,891 lbs/day to 14,891 lbs/day.

Re-allocation expressed as a percentage of the total of 95,000 lbs

FPLE	55,900 lbs/95,000 lbs = 58.8%
Fraser	14,636 lbs/95,000 lbs = 15.4%
RPC	9,570 lbs/95,000 lbs = 10.0%
IP	14,891 lbs/95,000 lbs = 15.6%

3. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

Summary of Oxygen Injection

A summary of oxygen injection requirements (assuming the TMDL default allocation of 105,000 lbs/day at Upper Narrows and 95,000 lbs/day at Lower Narrows) based on pollutant loading to GIP, compensation for existing oxygen injection at Upper Narrows to offset pollutant loading to GIP and the existing contractual obligation of the partnership for the existing system at Upper Narrows is as follows:

Upper Narrows		**Lower Narrows**	
FPLE	14,700 lbs	FPLE	55,900 lbs
Fraser	10,500 lbs	Fraser	14,636 lbs
RPC	39,900 lbs	RPC	9,570 lbs
IP	39,900 lbs	IP	14,891 lbs

4. WAUSAU-MOSINEE (N/F)

The Wausau-Mosinee (WM) papermaking facility is located approximately 5 miles downstream of IP's Androscoggin mill and produces approximately 220 tons/day of paper from purchase pulp. The WM facility does not have its own waste water treatment facility so process waste waters from the mill are conveyed to IP's waste water treatment facility via a pipeline and co-mingled with IP's waste streams for treatment. Based on information provided by WM, the Department has determined that WM's influent loadings expressed as a percentage of IP's total influent loading to its waste water treatment facility are as follows:

BOD5 7.8% TSS 3.5%

Total P 1.15% Ortho-P 0.63%

Flow 6.7%

The Department is in receipt of a copy of a letter dated December 16, 2005 from IP to Wausau-Mosinee (WM) indicating IP was providing official written notice of termination of the Waste Treatment Agreement between the two parties. The letter indicated the termination was December 16, 2010.

To address the potential elimination of process waste water flows being treated at the IP waste water treatment facility that are generated at the WM and conveyed to IP, the Department is establishing an alternate set of BOD, TSS, total phosphorus and ortho-phosphorus based on proportional decrease in influent loadings to IP from WM.

4. WAUSUA-MOSINEE (N/F)

Utilizing the percentages on the previous page, the Department has modified the limitations for said parameters in Special Condition A(1) proportionally. As a result, the limitations are as follows:

a. BOD5 – Reduction by 7.8%

With WM			**Without WM**		
Mon. Avg (lbs/day)	Weekly Avg. (lbs/day)	Daily Max (lbs/day)	Mon. Avg (lbs/day)	Weekly Avg. (lbs/day)	Daily Max (lbs/day)
4,500	6,400	8,000	4,100	5,900	7,376

b. TSS – Reduction by 3.5%

With WM

	Monthly Avg.	60-Day Avg.	Annual Avg.	Daily Maximum
June 1 – Sept 30				
Upon cessation	12,000 lbs/day 12,000 lbs/day	12,000 lbs/day(1) 10,000 lbs/day(2)	17,557 lbs/day(3) 14,738 lbs/day(4)	22,300 lbs/day 22,300 lbs/day
Oct 1 – May 31				
Upon permit issuance	25,000 lbs/day 25,000 lbs/day	N/A N/A	17,557 lbs/day(3) 14,738 lbs/day(4)	44,600 lbs/day 44,600 lbs/day

Footnotes:
(1) Beginning June 1, 2006 (2) Beginning June 1, 2010
(3) Beginning January 1, 2006 (4) Beginning January 1, 2010

Without WM

	Monthly Avg.	60-Day Avg.	Annual Avg.	Daily Maximum
June 1 – Sept 30				
Upon permit issuance Beginning June 1, 2010	11,580 lbs/day 11,580 lbs/day	11,580 lbs/day(1) 9,650 lbs/day(2)	16,942 lbs/day(3) 14,222 lbs/day(4)	21,520 lbs/day 21,520 lbs/day
Oct 1 – May 31				
Upon permit issuance Beginning January 1, 2010	24,125 lbs/day 24,125 lbs/day	N/A N/A	16,942 lbs/day(3) 14,222 lbs/day(4)	43,039 lbs/day 43,039 lbs/day

Footnotes:
(1) Beginning June 1, 2006 (2) Beginning June 1, 2010
(3) Beginning January 1, 2006 (4) Beginning January 1, 2010

4. WAUSUA-MOSINEE (N/F)

c. Total phosphorus and Ortho-phosphorus – Reduction by 1.15 and 0.63% respectively.

	With WM	**Without WM**
Parameter	Monthly Average	Monthly Average
Total phosphorus		
Beginning upon cessation	150 lbs/day	148 lbs/day
Beginning June 1, 2008	130 lbs/day	128 lbs/day
Ortho-phosphorus		
Beginning upon cessation	33 lbs/day	33 lbs/day
Beginning June 1, 2008	22 lbs/day	22 lbs/day

5. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted (based in part on the recommendations in May 2005 final TMDL), the Department has determined the existing water uses will be maintained and protected and anticipates additional improvements in water quality after implementation of water quality based limits herein that will result in the discharge not causing or contributing to the failure of the Androscoggin River to meet standards of its assigned Class C classification.

6. PUBLIC COMMENTS

Those persons receiving copies of the draft permit or parties that have expressed interest in this permitting action shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

7. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7693
E-mail: gregg.wood@maine.gov

8. RESPONSES TO COMMENTS

Reserved